Internationalization and Localization

WHAT IS?

Internationalization

- Is the process of designing a software so that it can potentially be adapted to various languages and regions without engineering changes.

Localization

- Is the process of adapting internationalized software for a specific region or language by adding locale-specific components and translating text.

CREATING PROPERTIES FILES

I18NBundle Class

- Is used to store and fetch strings that are locale sensitive.

We have to create the I18N folder in the assets folder, and inside we'll create the different bundles. For example:

- MyBundle.properties

- MyBundle_de.properties

- MyBundle_en_GB.properties

- MyBundle_it.properties

CREATING PROPERTIES FILES

We should always create a default properties file. For example the MyBundle.properties content would be like this:

```
game=My Super Cool Game
newMission={0}, you have a new mission. Reach level {1}.
coveredPath=You covered {0,number}% of the path
highScoreTime=High score achieved on {0,date} at {0,time}
```

The content of the MyBundle_it.properties can be this:

```
newMission={0}, hai una nuova missione. Raggiungi il livello {1}.
coveredPath=Hai coperto il {0,number}% del percorso
highScoreTime=High score ottenuto il {0,date} alle ore {0,time}
```

CREATING A BUNDLE

For instancing the I18NBundle class:

```
FileHandle baseFileHandle = Gdx.files.internal("i18n/MyBundle");
Locale locale = new Locale("fr", "CA", "VAR1");
I18NBundle myBundle = I18NBundle.createBundle(baseFileHandle, locale);
```

Or if we are using AssetManager:

```
assetManager.load("i18n/MyBundle", I18NBundle.class);
I18NBundle myBundle = assetManager.get("i18n/MyBundle",
I18NBundle.class);
```

If you don't specify any locale when you invoke createBundle then
the default locale is used.

CREATING A BUNDLE

If a property file for the specified Locale does not exist, createBundle tries to find the closest match.

For example, if you requested the locale fr_CA_VAR1 and the default Locale is en_US, createBundle will look for files in the following order:

- MyBundle_fr_CA_VAR1.properties

- MyBundle_fr_CA.properties

- MyBundle_fr.properties

- MyBundle_en_US.properties

- MyBundle_en.properties

- MyBundle.properties

FETCHING LOCALIZE STRINGS

To recovery a translated value from the bundle:

```
String value = myBundle.get(key);
```

If the strings have parameters:

```
String game = myBundle.format("game");
String mission = myBundle.format("newMission", player.getName(),
nextLevel.getName());
String coveredPath = myBundle.format("coveredPath", path.getPerc());
String highScoreTime = myBundle.format("highScoreTime",
highScore.getDate());
```